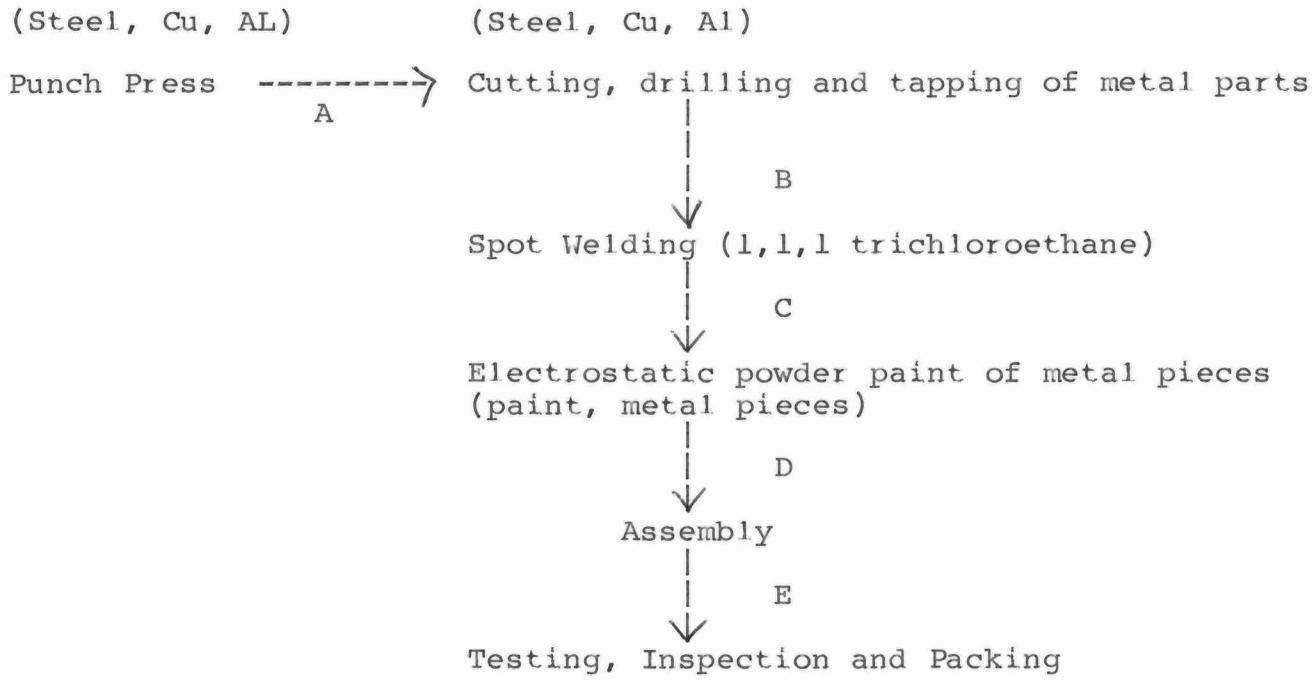
TABLE 2: RAW MATERIALS UTILIZED DURING THE MANUFACTURING PROCESS BEFORE 1986

RAW MATERIALS	PROCESS
Dolph 2016 (Mek Peroxide Solution)	Impregnation
Dolph 1215 (Polybutadiene Resin)	Impregnation
Magnus 763 NF (Cresylic Acid)	Impregnation
Magnus 800X (Phosphoric Acid Solution)	Phosphatizing
Magnus Z-24 (Zinc Phosphate Solution)	Phosphatizing
Magnus 820 (Chromic Acid Solution)	Phosphatizing
Polycarbonate Resin (Molding Powder)	Plastic Molding
Epoxy Resin	Coating
Vinyltoluene	Impregnation
Magnus 663-X (Sodium Hydroxide Solution)	Phosphatizing
Copper	Punch Press, Welding
Steel	Punch Press
Aluminum	Punch Press
Lubricant Oils	Screw Machine
EP Coolant	Screw Machine
1,1,1 trichloroethane	Spot Welding
Silver Brazing Alloys	Brazing
Silica	Assembly
Toluene	Impregnation

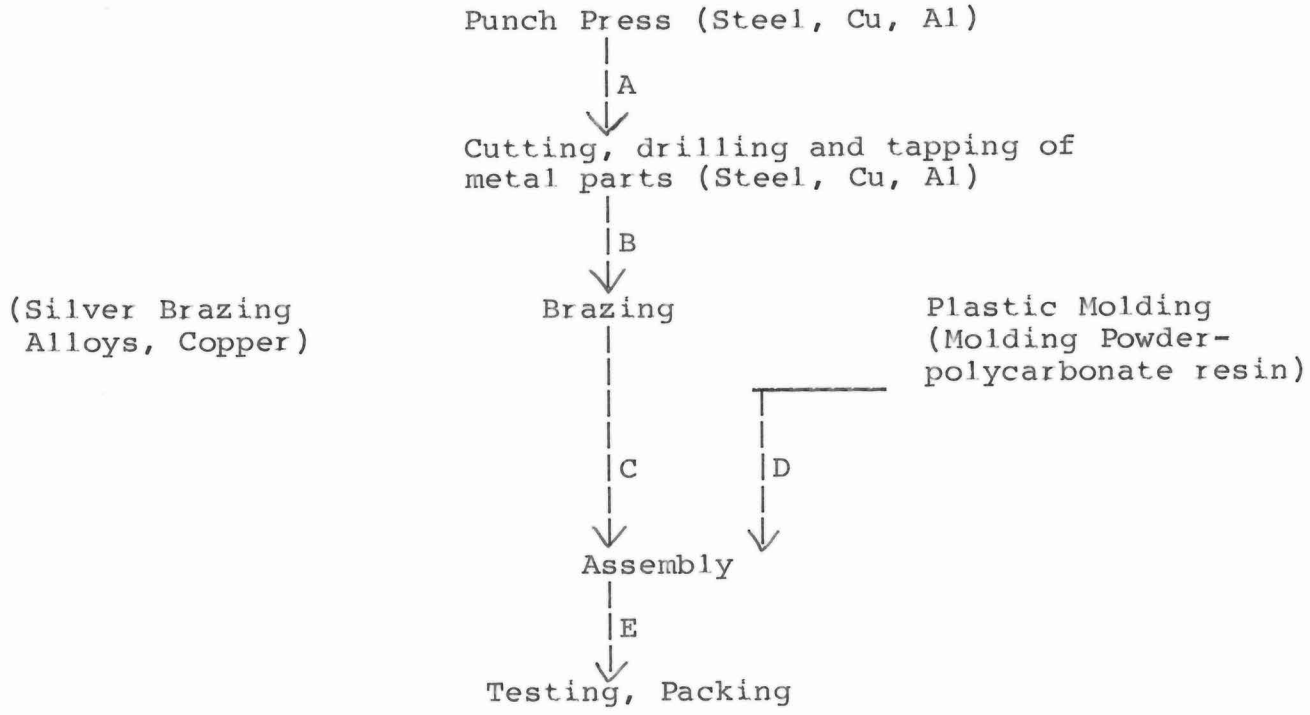
At present, the only raw materials used are the polycarbonate resin and copper rolls.

Summary of the manufacturing process was as follows:

Building #1 (PRD000692590)



Building #2 (PRD090399973)



The following hazardous wastes were generated by the facility in the indicated processes from its start-up to 1985. (Please refer to the previous summary).

1) Flux Oil (D008)	Cleaning and maintenance of Flow Solder Machine.
2) Spent Oil (D008)	Molding Machine, Screw Machine, Punch Press Machine.
3) 1,1,1 Trichloroethane (F001)	Degreasing of metal parts.
4) Waste Paint (D001)	Spray Booth Painting in Río Piedras, and Añasco Plants. Electrostatic Powder Paint process.
5) Waste Oxidizer (D002, D007)	Cleaning of metal parts.

The following wastes were not generated by this facility. They were generated on other G.E. plants but were transported and stored in the hazardous wastes container storage area of this facility;

Waste	Generator
1) Sludge from phosphatizing process (D007)	G.E. Añasco
2) Rinsewaters from electroplating operations (D003, D011)	G.E. Vieques
3) Corrosive Solution from Bright Dip Process (D002)	G.E. Vieques
4) Spent Cresylic Acid (F004)	G.E. Añasco
5) 1,1,1 Trichloroethane (F001)	G.E. Añasco, G.E. Vieques
6) Waste Paint (D001)	G.E. Añasco

C. IDENTIFICATION OF ALL WASTE STREAMS

At present, no hazardous wastes are generated by the company since 1986 when building #1 was selled to another G.E. subsidiary. Since this date on facility consists of building #2 only.

One Solid Waste Management Unit (SWMU's) and one Areas of Concern (AOC's) have been identified. These are:

A) SWMU1 - Hazardous Wastes Container Storage Area
B) AOC 1 - Paint Room

For a location of all these SWMU's and AOC's refer to attachments 1 and 2.

Table 3 describes waste flow for all identified wastes from the point of generation through ultimate disposition.

TABLE 3: WASTE FLOW DIAGRAM

WASTE	GENERATION	TREATMENT	STORAGE	DISPOSAL
Flux Oil (D008)	Cleaning and maintenance of Flow Solder Machine located in the Río Piedras Plant	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc. Safety Kleen Envirosystems of Puerto Rico.
Spent Oil (D008)	Molding Machine, Screw Machine, Punch Press Machine (Río Piedras Plant).	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc., Safety Kleen Envirosystems of Puerto Rico.
1,1,1 Trichloroethane (F001)	Degreasing of metal Parts on building #1 Río Piedras Plant.	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc. Safety Kleen Envirosystems of Puerto Rico.
Waste Paint (D001)	Spray Booth Painting in Río Piedras. Electrostatic powder paint in Río Piedras Plant.	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc. Safety Kleen Envirosystems of Puerto Rico.
Lead Scrap	Wave Soldering Process on Río Piedras Plant.	N/A	Temporary stored on SWMU1. Stored in 55 G Steel containers.	Chemical Waste Management, Inc. Safety Kleen Envirosystems of Puerto Rico.
Waste Oxidizer (D002, D007)	Cleaning of metal parts in Río Piedras Plant (Consisted mainly of acids solutions, HCl).	N/A	Temporary stored on SWMU1. Stored in 55 G plastic containers.	Chemical Waste Management, Inc. Safety Kleen Envirosystems of Puerto Rico.
Sludge from phosphatizing process (D007)	Phosphatizing process on GE Añasco.	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management, Inc.
Spent Oil (D008, D001)	G.E. Vieques and G.E. Añasco. Machines Maintenance.	N/A	Temporary stored on SWMU1. Stored in 55 G steel/ plastic containers	Chemical Waste Management Inc.

WASTE	GENERATION	TREATMENT	STORAGE	DISPOSAL
Rinsewaters from Electroplating Operations (D003, D011)	Electroplating operations on G.E. Vieques	N/A	Temporary stored on SWMU1. Stored in 55G plastic containers.	Chemical Waste Management Inc.
1,1,1 Trichloroethane (F001)	Degreasing G.E. Vieques and G.E. Añasco	N/A	Temporary stored on SWMU1. Stored in 55 G steel/ plastic containers.	Chemical Waste Management Inc.
Corrosive Solution from Bright Dip Process (D002)	Bright Dip Process on G.E. Vieques	N/A	Temporary stored on SWMU1. Stored in 55 G plastic containers.	Chemical Waste Management Inc.
Waste Paint (D001)	Spray Booth Painting on G.E. Añasco	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc.
Spent Cresylic Acid (F004)	Impregnation process on G.E. Añasco	N/A	Temporary stored on SWMU1. Stored in 55 G steel containers.	Chemical Waste Management Inc.

D. REGULATORY HISTORY

A Closure Plan was submitted on October 20, 1985 for the closure of the Hazardous Wastes Container Storage Area located on building #2. On December 31, 1986 a revision to this Closure Plan was submitted. Public Notice requesting comments on this Closure Plan was issued on January 16, 1988. The closure activities for the hazardous wastes storage area were performed during July 12-16 and August 13-15, 1988.

The facility name was General Electric Low Voltage Products Inc., but as of January 1985 the facility has changed the name to Caribe General Electric Products Inc.

During 1986 building #1 (PRD000692590) was selled to another G.E. subsidiary (General Electric of Caribe).

On letter dated November 29, 1984 EQB approved the petition requested by G.E. Río Piedras (building #2) to be reclassified from a TSD and Generator to a Non-Handler of Hazardous Waste. For a copy of this letter refer to attachment 3.

Different TSD Inspections to this facility revealed some violations to the RCRA Regulation. For Details of the findings of these inspections see table 1.

E. MAPS

Attachment 1 and 2 shows a facility map including the location of all SWMU's and Areas of Concern.

Attachment 4 shows a facility location on a topographic map.

Attachment 7 shows facility location on the Soil Survey Map.

III. ENVIRONMENTAL SETTING

A. SURROUNDING LAND USE

Caribe General Electric Products, Inc. is located in an area zoned as industrial by the Puerto Rico Planning Board. The facility is not located on the 100 year flood zone.

Caribe General Electric Products, Inc. is surrounded to the north by Crossco Manufacturing Corp. to the south by Borg Warner, to the east by a private property and to the west by "La Brisa" Street.

B. METEREOLOGY

As it is described in the Soil Survey of San Juan Area of Puerto Rico made by the Soil Conservation Service: "In winter the average temperature at San Juan is 77 degrees F, and the average daily minimum temperature is 70. The lowest temperature on record, which occurred at San Juan on March 3, 1957, is 60 degrees. In summer the average temperature is 82 degrees, and the average daily maximum temperature is 88."

"Of the total annual precipitation at San Juan, 31 inches, or 56 percent, usually falls in April through September, which includes the growing season for most crops."

"From June through November, an occasional tropical depression skirts or crosses the area and produces heavy rainfall that causes severe flooding. Thunderstorms number about 40 each year, 17 of which occur in summer. Every 10 to 20 years a hurricane causes wind damage and flooding."

Average yearly precipitation in the area is approximately 54.63 inches.

C. SURFACE HYDROLOGY

According to topographic maps the nearest water body is Laguna San José which is located at 2 Km. north to the facility.

Facility is not located on a flood plain. Refer to Attachment 4 for the topographic map.

D. GEOLOGY AND SOILS

According to the Soil Survey of San Juan Area of Puerto Rico (Sheet #9) Caribe General Electric products, Inc. is located in an area where soils had not been surveyed. Refer to attachment 7).

A geological map reveals that this facility is located on a geologic formation named QTt Unit (Older Alluvial Deposits).

This formation is described as follows: "Clay, silty and sandy, mainly red or mottled red lightgray. Includes Mucarabones sand and San Sebastián Formation in area east of the Río Piedras. Thickness variable but probably greater than 100 m in places."

Also, according to the geological map, the topography is of low relief which means that it is a low laying terrain.

Soil is the characteristic soil found in the north of the island of Puerto Rico from Río Piedras to Luquillo. The soil is mainly clayish.

E. HYDROGEOLOGY

Little information is available on the groundwater quality beneath the facility.

According to EQB Groundwater Program data no groundwater wells are located on a 1km radius from this site.

IV. SUMMARY OF VISUAL SITE INSPECTION

Two visual site inspections to Caribe General Electric Products, Inc. were performed on July 6, 1989 and September 13, 1989.

During the first visual site inspection all the manufacturing processes performed at the facility were observed and all the SWMU's and AOC's were identified.

During the second visual site inspection all SWMU's and AOC's were reinspected. Also, photos from the different units and areas were obtained.

The following personnel was present during this VSI:

Mrs. Milagros Ruiz - Environmental Coordinator, GE
Mr. Ernesto Mieres - Plant Manager
Mrs. Elsie Ríos - Environmental Health and Safety Specialist
Mr. Harold Carrasquillo - EQB
Mrs. Teresa Colón - EQB

The following observations were made during the VSI:

The area has a concrete floor. It is roofed and diked.

No wastes were found stored in the area since area was properly decontaminated on July - August 1988.

A photo of the unit was taken during VSI.

RCRA FACILITY ASSESSMENT REPORT
CARIBE GENERAL ELECTRIC PRODUCTS, INC.
RIO PIEDRAS PLANT, RIO PIEDRAS, PUERTO RICO
EPA ID NO. PRD000692590; PRD090399973

HAROLD CARRASQUILLO ALBERTY
EQB LAND POLLUTION CONTROL AREA
HAZARDOUS WASTE DIVISION
NOVEMBER, 1989

V. SOLID WASTE MANAGEMENT UNITS (SWMU'S) AND AREAS OF CONCERN

One Solid Waste Management Unit (SWMU's) and One Areas of Concern (AOC's) have been identified.

A detailed description of each unit follows:

A. SWMU1

Unit Number: SWMU-1

Unit Name: Hazardous Wastes Container Storage Area

Unit Description: The Hazardous Wastes container Storage Area is located on the east side of building #2. The drum storage area consists of an 18 feet by 40 feet aluminium building. The area is completely enclosed with windows at the south side wall to allow adequate ventilation, and has a locked gate to prevent the entrance of unauthorized personnel. It also has signs indicating the storage of hazardous wastes in the area. The floor has a 4 inch high dike. There exist three sumps to contain any hazardous waste spill within the dike. The base of the storage are is constructed of a 4 inch thick concrete slab over a 2 inch thick coarse sand.

Attachment 1 shows location of this unit.

For a layout of this unit see attachment 5 and photos.

The maximum inventory of wastes that have been stored in the area at any one time was 100 drums (55 gallon).

A closure plan was submitted for this unit on October 20, 1985 and closure of the area was performed according to specifications of the approved Closure Plan. A Certification of Completion of Closure for this unit was submitted on September 30, 1988. For a copy of this certification see attachment 11. Closure activities were performed during the period of July 12 to 16 and August 13-15, 1988.

Date of Start-up:	1981
Current Status:	Unit was decontaminated and properly closed on July 12-16 and August 13-15, 1988. It is not in use at present since facility is not generating hazardous wastes.
Waste Managed:	The following hazardous wastes had been at least once stored for more than 90 days in this area: Flux Oil D008 Spent Oil D008 1,1,1 Trichloroethane F001 Sludge from phosphatizing D007 Process Rinsewaters from electroplating D003,D011 Operations Corrosive Solution from Bright D002 Dip Process Lead Scrap Waste Paint D001 Spent Cresylic Acid F004 Mixed Acids D002, F007 Waste Oxidizer, D002, D007 Alcohol Flux, D001 Sodium Hydroxide, D002 Polybutadiene Resin, D001 All wastes were stored temporarily in this unit, prior to their disposal by: Chemical Waste Management Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459 and/or Safety Kleen Envirosystems Co. of PR Inc. Km. 51 Highway 2 P.O. Box 1098 Manatí, PR 00701

Release Control:	The unit floor is surrounded by a 4 inch high dike that constitutes the secondary containment system with a liquid holding capacity of gallons approximately. Three sumps with dimensions 2' x 2' x 2' exist in the area.
History of Release:	No release has ever been reported from this unit. No evidence of release was observed during Visual Site Inspection.
Environmental Setting:	Since the unit secondary containment system for the control of release seams to be adequate, the probability that any hazardous waste from the unit reach the soils and groundwater is considered low. However, since it is not in use at this time, no threat to the environment exists at this time.

B. AOC-1

Unit Number:	AOC-1
Unit Name:	Paint Room
Unit Description:	The paint room was located on the east side of building #1. See attachment 2. This room was devoted to steel on closure relays painting. Steel enclosures of relays were painted with black paint in this area.
Date of Start-up:	1965
Current Status:	Not in use since 1985.
Waste Managed:	No wastes were managed here since this was a manufacturing area. The only raw materials used on this area were paint thinner and cresylic acid.
Release Control:	None
History of Release:	On September 8, 1984, 20 -25 gallons of cresylic acid spilled in this room due to a rupture on a degreasing tank. According to an EQB report: "Spillage was controlled using absorbing pads which are properly stored in steel drums for final disposal. There was no considerable damages resulting from the described incidents. Spillage did not go further facility boundaries."
Environmental Setting:	Since the area lacked of a secondary containment system for the control of release, the probability that any waste from the area reach the soil/groundwater was considered high at that time.

VI. CONCLUSIONS AND FURTHER ACTIONS

In summary one (1) Solid Waste Management Unit (SWMU) and one (1) Area of Concern (AOC) have been identified at the Caribe General Electric Procucts, Inc., of Río Piedras, Puerto Rico.

SWMU-1 (Hazardous Waste Container Storage Area)

This area was properly decontaminated and closed during July - August 1988. On letter dated September 30, 1988 EQB determined that the closure of this area was performed in accordance with the Closure Plan. (Refer to attachment 12).

The area will not be used anymore since facility is not generating hazardous waste since 1985. Therefore no further action is recommended at this moment.

AOC-1 (Paint Room)

The area where the 20 - 25 gallons spillage of cresylic acid occurred was cleaned and the resulting absorbing pads with the contaminated material were properly disposed. According to an EQB report about this spill incident the spillage did not exceeded facility boundaries. Since no evidence of sampling is available for the area, a sampling visit is recommended. Unit is inactive since 1985 and actually it is devoted to warehouse practices.

Table 4 summarize actions that have been recommended for the identified SWMU's and AOC's of the industry under study.

Table 4: Summary of Further Actions

Unit	Unit Name	Release Pathways	Further Action
SWMU1	Hazardous Wastes Container Storage Area	Soil, Groundwater	No further action
AOC1	Paint Room	Soil, Groundwater	Sampling visit

HC/eas